

FIG. 1

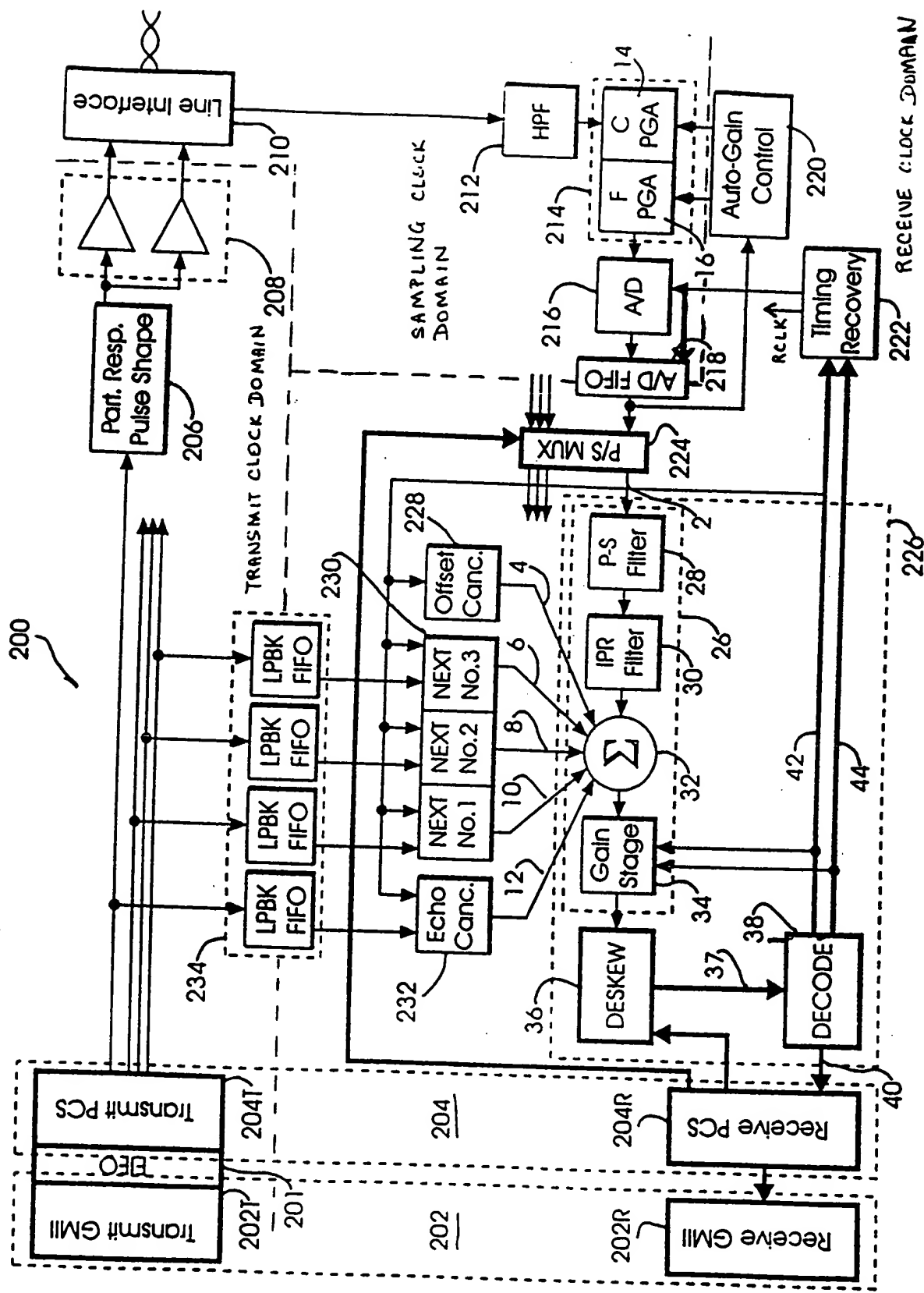


FIG. 2

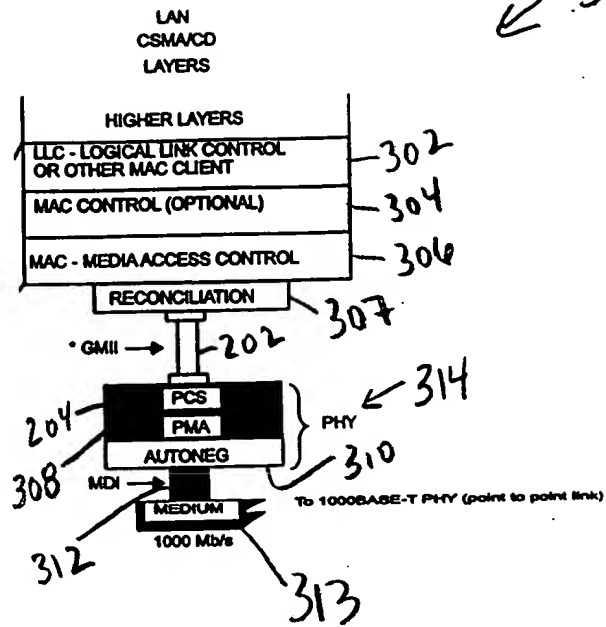


FIG. 3

$$Sy_n[0] = Scr_n[0]$$

$$Sy_n[1] = g(Scr_n[0]) = Scr_n[3] \wedge Scr_n[8]$$

$$Sy_n[2] = g^2(Scr_n[0]) = Scr_n[6] \wedge Scr_n[16]$$

$$Sy_n[3] = g^3(Scr_n[0]) = Scr_n[9] \wedge Scr_n[14] \wedge Scr_n[19] \wedge Scr_n[24]$$

$$Sx_n[0] = X_n = Scr_n[4] \wedge Scr_n[6]$$

$$Sx_n[1] = g(X_n) = Scr_n[7] \wedge Scr_n[9] \wedge Scr_n[12] \wedge Scr_n[14]$$

$$Sx_n[2] = g^2(X_n) = Scr_n[10] \wedge Scr_n[12] \wedge Scr_n[20] \wedge Scr_n[22]$$

$$Sx_n[3] = g^3(X_n) = Scr_n[13] \wedge Scr_n[15] \wedge Scr_n[18] \wedge Scr_n[20] \wedge \\ Scr_n[23] \wedge Scr_n[25] \wedge Scr_n[28] \wedge Scr_n[30]$$

$$Sg_n[0] = Y_n = Scr_n[1] \wedge Scr_n[5]$$

$$Sg_n[1] = g(Y_n) = Scr_n[4] \wedge Scr_n[8] \wedge Scr_n[9] \wedge Scr_n[13]$$

$$Sg_n[2] = g^2(Y_n) = Scr_n[7] \wedge Scr_n[11] \wedge Scr_n[17] \wedge Scr_n[21]$$

$$Sg_n[3] = g^3(Y_n) = Scr_n[10] \wedge Scr_n[14] \wedge Scr_n[15] \wedge Scr_n[19] \wedge \\ Scr_n[20] \wedge Scr_n[24] \wedge Scr_n[25] \wedge Scr_n[29]$$

FIG. 4

$$Sy_n[0] = Scr_{n+1}[6]$$

$$Sy_n[1] = g(Scr_n[0]) = Scr_n[3] \wedge Scr_n[8]$$

$$Sy_n[2] = g^2(Scr_n[0]) = Scr_n[6] \wedge Scr_n[16]$$

$$Sy_n[3] = g^3(Scr_n[0]) = Scr_n[9] \wedge Scr_n[14] \wedge Scr_n[19] \wedge Scr_n[24]$$

$$Sx_n[0] = X_n = Scr_n[4] \wedge Scr_n[6]$$

$$Sx_n[1] = g(X_n) = Scr_n[7] \wedge Scr_n[9] \wedge Scr_n[12] \wedge Scr_n[14]$$

$$Sx_n[2] = g^2(X_n) = Scr_n[10] \wedge Scr_n[12] \wedge Scr_n[20] \wedge Scr_n[22]$$

$$Sx_n[3] = g^3(X_n) = Scr_n[13] \wedge Scr_n[15] \wedge Scr_n[18] \wedge Scr_n[20] \wedge \\ Scr_n[23] \wedge Scr_n[25] \wedge Scr_n[28] \wedge Scr_n[30]$$

$$Sg_n[0] = Y_n = Scr_n[1] \wedge Scr_n[5]$$

$$Sg_n[1] = g(Y_n) = Scr_n[4] \wedge Scr_n[8] \wedge Scr_n[9] \wedge Scr_n[13]$$

$$Sg_n[2] = g^2(Y_n) = Scr_n[7] \wedge Scr_n[11] \wedge Scr_n[17] \wedge Scr_n[21]$$

$$Sg_n[3] = g^3(Y_n) = Scr_n[10] \wedge Scr_n[14] \wedge Scr_n[15] \wedge Scr_n[19] \wedge \\ Scr_n[20] \wedge Scr_n[24] \wedge Scr_n[25] \wedge Scr_n[29]$$

FIG. 5

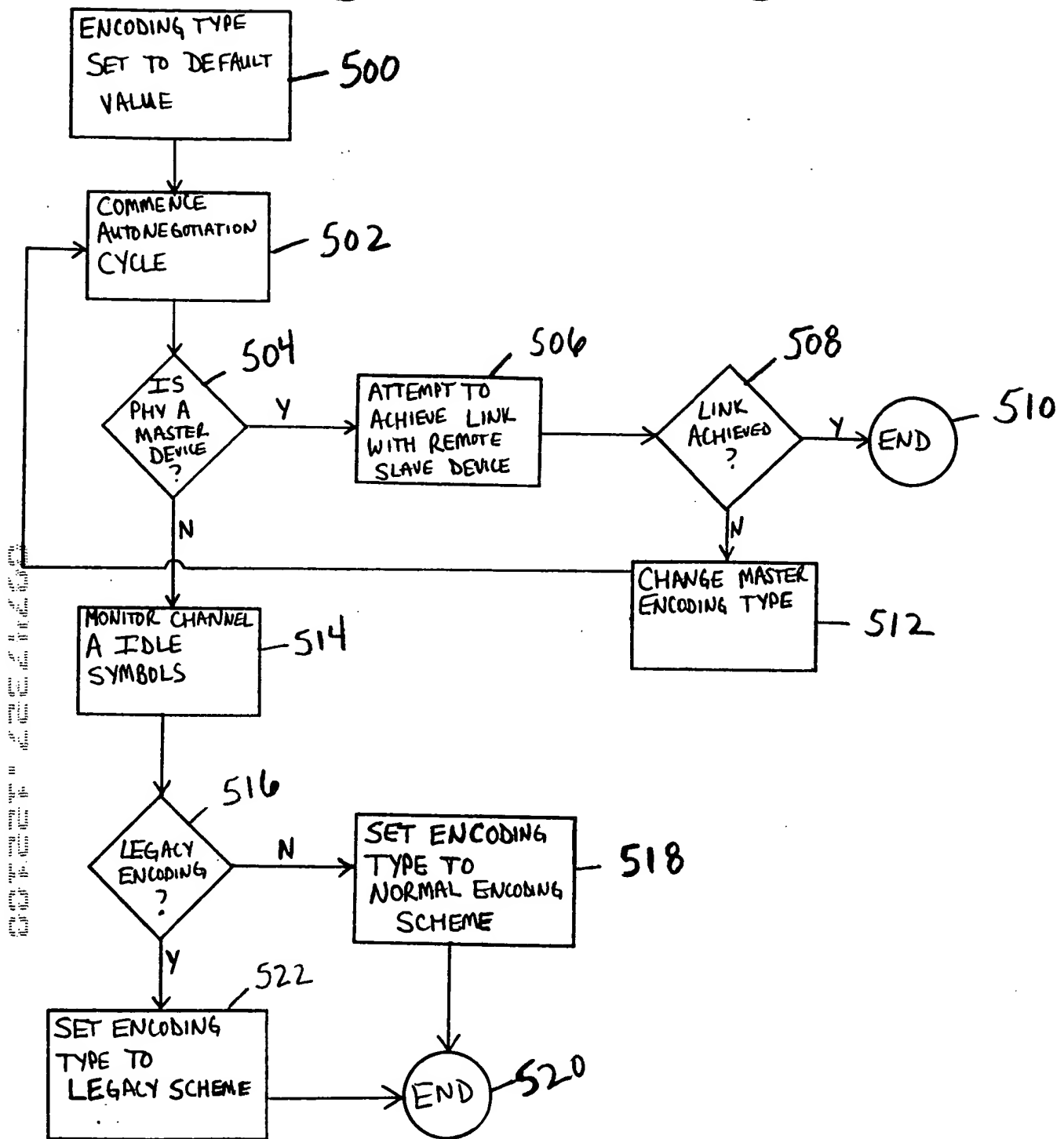


FIG. 6

	First Autonegotiation cycle		Second Autonegotiation cycle	
	PHY A	PHY B	PHY A	PHY B
PHY Type	legacy	legacy	N/A	
Master/Slave	Master	Slave		
EncodingType	legacy	legacy		
Result	Link up	Link up		

FIG. 7

	First Autonegotiation cycle		Second Autonegotiation cycle	
	PHY A	PHY B	PHY A	PHY B
PHY Type	legacy	Other	N/A	
Master/Slave	Master	Slave		
EncodingType	legacy	Either		
Result	Link up	Detects legacy encoding, sets EncodingType to legacy, starts transmitting IDLE and links up.		

FIG. 8

	First Autonegotiation cycle		Second Autonegotiation cycle	
	PHY A	PHY B	PHY A	PHY B
PHY Type	legacy	Other	N/A	
Master/Slave	Slave	Master		
EncodingType	legacy	legacy		
Result	Link up	Link up		

FIG. 9

	First Autonegotiation cycle		Second Autonegotiation cycle	
	PHY A	PHY B	PHY A	PHY B
PHY Type	legacy	Other	legacy	Other
Master/Slave	Slave	Master	Slave	Master
EncodingType	legacy	Normal	legacy	legacy
Result	Fails to link, restarts autonegotiation	Fails to link, flips EncodingType to legacy , restarts autonegotiation	Link up	Link Up

FIG.10

	First Autonegotiation cycle		Second Autonegotiation cycle	
	PHY A	PHY B	PHY A	PHY B
PHY Type	Other	Other	legacy	Other
Master/Slave	Master	Slave	N/A	
EncodingType	legacy	legacy		
Result	Link Up	Link Up		

FIG.11

	First Autonegotiation cycle		Second Autonegotiation cycle	
	PHY A	PHY B	PHY A	PHY B
PHY Type	Other	Other	N/A	
Master/Slave	Master	Slave		
EncodingType	legacy	Normal		
Result	Link Up	Detects legacy encoding, sets EncodingType to legacy , starts transmitting IDLE and links up.		

FIG.12



	First Autonegotiation cycle		Second Autonegotiation cycle	
	PHY A	PHY B	PHY A	PHY B
PHY Type	Other	Other	N/A	
Master/Slave	Master	Slave		
EncodingType	Normal	Normal		
Result	Link Up	Link Up		

FIG.13

	First Autonegotiation cycle		Second Autonegotiation cycle	
	PHY A	PHY B	PHY A	PHY B
PHY Type	Other	Other	N/A	
Master/Slave	Master	Slave		
EncodingType	Normal	legacy		
Result	Link Up	Detects normal encoding, sets EncodingType to normal, starts transmitting IDLE and links up.		

FIG.14

# SLAVE SILENT STATE OF PHY CONTROL STATE DIAGRAM

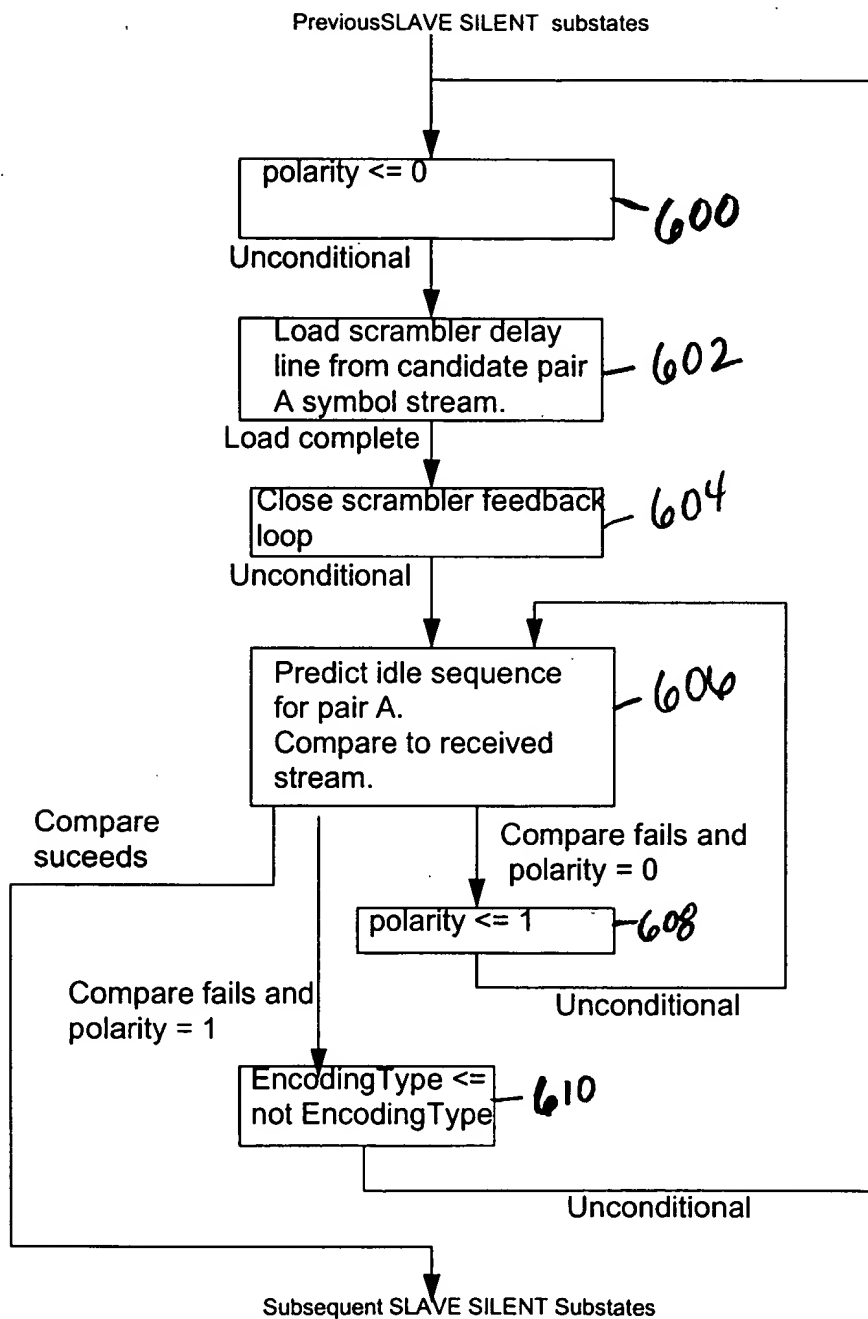


FIG. 15